

# Rural Transformation and Structural Change: insights from Developing Countries facing Globalization

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*Sandrine FREGUIN-GRESH<sup>1</sup>, Eric WHITE<sup>2</sup>, Bruno LOSCH<sup>3</sup>*

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## **Abstract**

*Agriculture has a key role in development and poverty reduction. But beyond its role in producing food, it should also generate activities, income, and employment to facilitate rural transformation and structural change. This is particularly the case for developing countries facing the challenges of incipient economic transitions and quickly evolving demographic context characterized by growing cohorts of new labor market entrants. While a larger labor force offers countries new opportunities for growth related to the “demographic dividend,” it also could pose socio-political risks if investments and public policies are inappropriate to support the processes underway.*

*The paper explores rural transformation and structural change by presenting an in-depth analysis of the socio-economic development of rural, mostly agricultural-based, regions in Africa and Meso-America where the RuralStruc Program collected and analyzed about 8,000 rural household surveys. The results of the Program show that contrary to conventional wisdom, the liberalization of agriculture has not led to a massive agricultural restructuring or to a rapid integration of farmers into the global economy. Neither has it led to the development of the buoyant rural non-farm economy so often discussed in the literature. The investigation also shows a strong relationship between income and the diversification/ specialization of rural households in terms of economic activities. An “inverted U” pattern is observed and can be understood as follows: whereas poorer households diversify to mitigate risks, households that are more well-off can make larger investments and begin to specialize to take advantage of these new assets. In Sub-Saharan Africa in particular, high level of risks and limited economic opportunities constrain households’ options and hence their economic returns. This situation can generate possible poverty traps for low-income farmers. Considering these socio-economic challenges in light of the dramatic demographic shift underway on the continent, policy orientations should reintegrate structural issues and avoid short-term policy priorities, which have driven most of the agenda over the last 30 years.*

## **Key words**

Sub-Saharan Africa, demographic transition, structural change, agriculture, rural diversification

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<sup>1</sup> Sandrine FREGUIN-GRESH (CIRAD) was a member of the coordination team of the RuralStruc program

<sup>2</sup> Eric WHITE (World Bank, Integra LLC) substantially contributed to the RuralStruc program, in particular in the preparation of the final report of the program on which this paper is based

<sup>3</sup> Bruno LOSCH (CIRAD) was the World Bank coordinator of the RuralStruc program

During the second half of the twentieth century, the world experienced dramatic population growth, with the number of inhabitants doubling from 3 to 6 billion between 1960 and 2000. According to today's latest estimates, the world's population will reach 9 billion people by 2050 (UN 2008). However, significant changes in demographic trends have occurred. In East Asia, Latin America, the Middle-East and North Africa, fertility rates dropped faster than expected. Combined with the decline in mortality rates, population growth in these regions has stabilized and the age structure of the population has changed, as predicted by the demographic transition model. However, previous growth rates translate today in a strong increase of the active population, notably in North Africa (CIHEAM 2012). In contrast, Sub-Saharan Africa (SSA) has experienced, and still experiences, rapid and massive population growth. The number of inhabitants on the sub-continent increased from 183 million in 1950 to 863 million in 2010 and is estimated to reach 1,753 million by 2050 (United Nations, World Population Prospects, 2008 revision). As stressed by Guengant (2009): *"SSA has experienced unique population growth rates since the 1960s [...] that have led to a rapid increase in the number of young people and to high dependency ratios. Between 1960 and 2010, the total population of SSA increased by 360%."* This tremendous demographic push has resulted in ever-larger cohorts of new labor market entrants. However, at the same time, formal job creation has remained weak and economic diversification incipient. This critical situation exacerbated with the recent tensions and uncertainty on labor markets resulting from the global economic crisis. It now raises the specter of increased risks of political and social instability, as illustrated by the tensions in North Africa and the Middle-East in the spring of 2011.

In this difficult context, the role of agriculture and its importance have been reaffirmed by publications such as the WDR08 or the IAASTD report. Additionally, since the food price crisis of 2008, the international community has made new commitments with new programs such as the GAFSP and renewed its support to regional action plans such as the Comprehensive Africa Agriculture Development Program (CAADP) of the New Partnership for Africa's Development (NEPAD). This reengagement is an opportunity to unlock African agriculture's enormous potential - especially regarding the abundant natural resources that are still available in the continent. Agriculture should be able to provide more activities, jobs, incomes, and food, while protecting the environment, contributing to poverty alleviation, and ultimately, to economic growth and social development.

The paper explores rural transformations underway in several rural, mostly agricultural-based regions in Africa and Meso-America where the RuralStruc Program<sup>4</sup> collected and analyzed about 8,000 rural household surveys. First, the paper describes the challenges of the double demographic and economic transitions, with a particular focus on the situation of African countries. The paper then provides an overview of rural transformations from the in-depth analysis of empirical data collected between November 2007 and May 2008 in 26 regions in Mali, Madagascar, Senegal, Kenya, Morocco, Nicaragua, and Mexico. RuralStruc's surveys in each region were based on the same positioning and questioning, and used the same survey instrument framework. Despite data limitations, this design offers a set of comparable statistics referring to the same period of time that documents both overarching patterns of development and the great diversity within rural societies (see Losch et al. 2012). The investigation describes the socio-economic situation of rural households, and shows a strong relationship between income and diversification that allows a better understanding of the constraints on households' returns and options, and of the origin of possible poverty traps for low income farmers. From the results, the paper proposes some food for thought to feed the policy debate.

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<sup>4</sup> The RuralStruc program on the 'Structural Dimensions of Liberalization in Agriculture and Rural Development' was a joint initiative of the World Bank, the French Cooperation (French Development Agency, Ministry of Agriculture and Fisheries, Ministry of Foreign and European Affairs, Agricultural Research Centre for International Development—CIRAD) and the International Fund for Agricultural Development. It was managed by the World Bank. With a duration of five years (2006–2010), its objective was to analyze the processes of liberalization and economic integration and their impacts on agriculture and the rural sector of developing countries. It also aimed to illustrate the situation of rural economies in terms of income, diversification, and overall transformation. The Program's work was conducted with teams of national experts and researchers. See: <http://www.worldbank.org/afr/ruralstruc>

## **The major challenges facing Africa today**

Sub-Saharan Africa (SSA) currently faces an intense demographic push. The population, estimated at about 1 billion people in 2010, has increased by an average of 2.5% per year over the last decade, after experiencing growth rates of 3 to 4% in the preceding decades (UN 2008). This growth rate is very high, especially when compared to the 1.2% observed in Latin America or Asia during the same period. At this rate, Africa's population will double in less than 40 years. This situation can be explained by the fact that SSA has yet to deal with its demographic transition, the world's last.

The demographic transition model seeks to explain the shift of countries from a situation of high birth and death rates to one of low birth and death rates. In developed countries, this transition began in the eighteenth century and continues today. Developing countries began the transition later and are still in the midst of earlier stages of the model. Demographers usually identify four stages. The transition starts from an initial stage where birth and death rates are high, then proceeds to a second stage where mortality rates are reduced thanks to improvements in sanitation, medicine and general economic development. At this stage, birth rates remain high or even increase, which results in a rapid increase in population. In the third stage, birth rates decline in turn due to a multiplicity of factors that are difficult to anticipate, and finally, natural population growth gradually decreases until a new equilibrium is achieved in a fourth and final phase, whereby the demographic transition has been achieved.

Many less developed countries, particularly in SSA, are currently in stage II of the model. Although a decline in mortality is observed in many developing countries, 31 out of the 35 countries worldwide that still have high fertility rates (greater than or equal to 5 births/woman), are located in SSA. For some of them, fertility has remained practically constant over the past three decades, while for others, fertility has declined only gradually while birth rates remain high. Everywhere, fertility decline appears slower than expected (Guengant 2009). One can note however that the model is affected by HIV/AIDS, whose impact on the evolution of mortality, fertility, and ultimately on the overall population, is not easy to anticipate.

The relationship between demography and development has generated much debate. According to the Malthusian approach, population growth is thought to have a deleterious effect on a country's prospects because it creates a strain -at least temporarily- on natural resources, infrastructure, and capital (Malthus 1798). These population pessimists argued that increased numbers of poor workers would reduce labor costs and ultimately make the poor even poorer. Population optimists (Boserup, 1981) have argued that population growth fosters economic growth. To them, demographic transition, by changing the age distribution, opens up a special window for faster economic growth and human development. It improves the ratio of productive workers to dependents in the population, which makes for quicker economic growth and fewer burdens on families. This opportunity, known as the "demographic dividend", clearly contributed to the "economic miracle" in East Asia (Bloom et al 2011). However, the dividend must be correctly managed through appropriate investments and public policies. If countries are unprepared, and if economies do not generate sufficient jobs, an increasing population rapidly becomes a source of social and political tension. Moreover, the window of the demographic dividend is fleeting. In time, the age distribution of the population will change again, as the large adult population becomes older and less productive, and the cohorts that replace them in the labor force are smaller due to declining fertility. When this occurs, the dependency ratio rises again, this time involving the need to care for the elderly, rather than the need to take care of the young.

Historically, population growth and urbanization go together, and economic development is closely correlated with urbanization. Rich countries are urban countries. No country has ever reached high income levels with low urbanization. Population growth increases density and, together with rural-urban migration, creates higher urban agglomeration. With an urbanization ratio (percentage of the population living in urban areas) approaching 40 percent, the urban

population has increased by a factor of 12 since 1960 in SSA (Losch et al. 2012). By 2025, more than half of the African population will be urban, and during the next quarter century the urban population will be growing almost twice as fast as the overall population, increasing by more than half a billion from 1990 levels. Unlike all other regions, however, urbanization in SSA has not contributed to overall growth in GDP through manufacturing and off-farm activities, and the bulk of new employment has taken place in the informal economy. Currently, for a median African country of 13 to 15 million people (such as Mali or Senegal), the annual cohort of young adults entering in labor markets is around 300,000, and of these, only between five and twenty percent are able to access formal employment. This cohort will grow to over 400,000 per year by 2025. Across SSA, these new workers represent 330 million jobs that need to be created in the next 15 years (equivalent to about twice the current workforce of the United States) (Losch et al. 2012). Moreover, all segments of the informal workforce – self-employed, casual, sub-contract, temporary and part-time workers and microentrepreneurs – also appear to be growing. And while the number of job seekers has been constantly increasing, competition exacerbated by globalization and constraints associated with climate change and environmental degradation have increased risks and uncertainty.

## **The Historical Pathway**

Understanding the process of structural change has been one of the core pieces of development and economic thinking from Lewis (1954), Kuznets (1973), Chenery et. al. (1986) to Timmer (1988, 2009). Most of the literature on structural change focuses on the transition from a predominantly agricultural-based and rural economy into a more diversified non-agricultural and urban one, with the reallocation of productive factors from traditional to modern agriculture, industry and services. Industrialization is then the central process of structural change. However, because structural change is most often triggered by productivity growth and increasing commercialization and specialization in agriculture, for many less developed countries where agriculture still plays a central role in the economy, the evolutions of agriculture and the process of rural change are observed with major attention.

The World Development Report 2008 *Agriculture for Development* (World Bank 2007) reaffirms the importance of agriculture and its role in development, food security, poverty, and inequality reduction. To reduce poverty the report offers three options: increasing productivity and competitiveness through specialization in agriculture (for better-endowed households with sufficient human, social, and financial capital); rural diversification (or non-agricultural wage labor and entrepreneurship) for those who are not able to specialize in agriculture, and migration for the others. This situation corresponds to the historical pattern of structural change as it has been observed in different regions of the world (Timmer 2009).

Yet what are the realistic options for rural change in SSA in the short/medium term considering today's challenges? Indeed, as previously stated, African countries have not (yet) truly experienced economic diversification, urbanization has not been accompanied by industrialization, and the urban poor largely survive through work in the informal economy.

If economic diversification (out of agriculture) is the easiest option to enhance structural transformation, and real opportunities do exist thanks to the international opening of global markets, technological change, and new options for manufacturing (among other benefits), SSA countries also face major handicaps in terms of assets and skills, asymmetries in productivity and competitiveness, and ecological constraints. Many of these countries can improve their situation, but it will be difficult to improve quickly enough to deal with the coming surge in labor supply.

International migrations have been a major historical component of structural change, providing jobs for individuals that wouldn't otherwise have found them in a transitioning country experiencing a labor surge. It is noteworthy, for example that about 60 million Europeans migrated to the "New Worlds" between 1850 and 1930. However, although migration can, in

theory, provide an outlet for less developed countries, under today's geopolitical context it can only be a marginal option. The prospects for massive new migrations are heavily constrained and "the Golden doors" (Clemens 2008) are almost closed in rich countries. The unavoidable aging of populations in Europe (and China) may over time progressively modify this reality, but even then the market for migration would be highly competitive. The average migration rate in countries bordering the developed world (such as countries in Central America or North Africa), where about 10% of the population live abroad, is not reproducible. If SSA were to achieve similar numbers, it would mean 86 million African migrants in Europe today.

Consequently, when taking a 15-year timeline and due to the coming surge in the labor force, the role of agriculture as well as the urban informal economy) is critical in SSA. But the continent face large and well-known constraints: poverty, weakness of rural income-generating activities, insufficient provision of public goods, and market imperfections. Moreover, SSA countries have to deal with globalization: huge and still growing asymmetries in productivity and competitiveness with other players, not just in the international market but in their domestic markets as well. These asymmetries of productivity and competitiveness in the context of an open economy also affect the local dimension of structural transformation. They limit the ability of the African regions to replicate the historical transition process, and there is a growing debate in the development community and in academia about the best options for transition under these circumstances. In this debate, views are often strongly divided between industrialists and agriculturists (urbanists and ruralists). And to help clarify this long-standing debate, it is useful to look more closely at the economies of cities and of rural areas, and review their respective capacities to absorb a growing labor force.

## **Rural transformations and structural change: Where do we stand in Africa?**

Based on an in-depth seven-country study (that included four African countries: Senegal, Madagascar, Kenya, and Mali), and relying on 8,000 rural household surveys, the RuralStruc Program reviews the very different levels of rural transformation depending on the country's stage in the structural transformation process. It particularly addresses the activity structures of rural household with reference to an evolving agricultural context marked by liberalization and trends of increasing economic integration.

First, one of the striking results of the investigation is the extent and severity of poverty. Poverty is widespread and affects most of the surveyed households. When comparing the incomes generated by sample households to the "absolute" and "relative" poverty lines of \$1 and \$2 per person per day respectively (see Figure 1), the estimates show that average incomes are close to the absolute poverty line, particularly in the poorest countries (such as Mali). Only regions with an *a priori* classification of "winning"--where market integration, value-chain development, and proximity of cities and/or infrastructures have great potential to enhance structural change generate average incomes higher than \$2 per day. Nakuru in Kenya is a clear example.

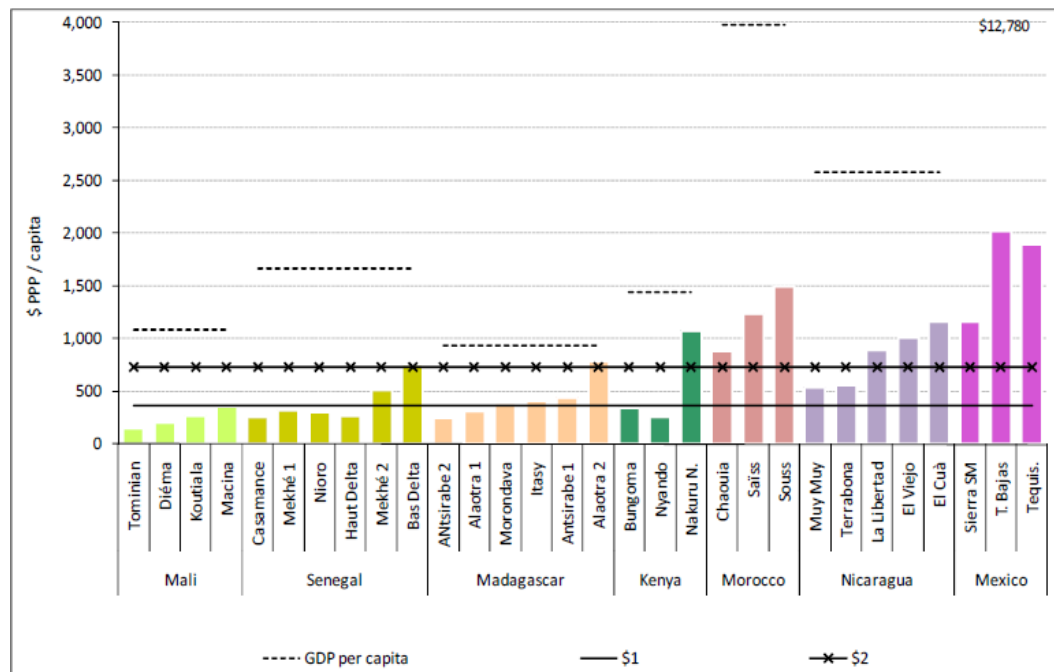


Figure 1: Median Annual Income per Capita in the Surveyed Regions (\$ PPP)

Sources: RuralStruc Surveys for the household incomes, WDI database for GDP data

Beyond overwhelming poverty, an important result that emerges from the survey is heterogeneity, something that is often overlooked and underplayed in rural studies. A closer analysis of the results, beyond regional averages, confirms the diversity and the variability of socio-economic situations, both between regions and within regions. This heterogeneity concerns the level and distribution of rural income, the degree of inclusion and integration into markets (goods, services, work), and also the structures of activities and incomes of household. Thus, when performing an analysis by quintiles of households, the situation of rural poverty is even more striking. The poorest quintiles generate \$54PPP p.a. in Casamance (Senegal), \$51PPP p.a. in Nyando and \$61PPP p.a. in Bungoma (Kenya), and \$64PPP p.a. in Tominian (Mali) - less than 15% of the poverty threshold. With this level of income, rural households remain extremely undernourished (they cannot deal with their daily kilocalories requirements). More generally, lower income households are extremely sensitive to risks, both economic (price, supply, and marketing) and natural (disasters) and their food situations are fragile.

Third, in all the regions of the study, almost all households (95 to 100%) implement an agricultural activity on a farm, with the main exception of landless families in Alaotra in Madagascar who mainly depend on agricultural waged labor. Besides being the most popular activity, agriculture is the main source of income, especially in Mali and in Madagascar. However, the contribution of farm income in total income, although high, varies significantly between surveyed regions (see Figure 2).

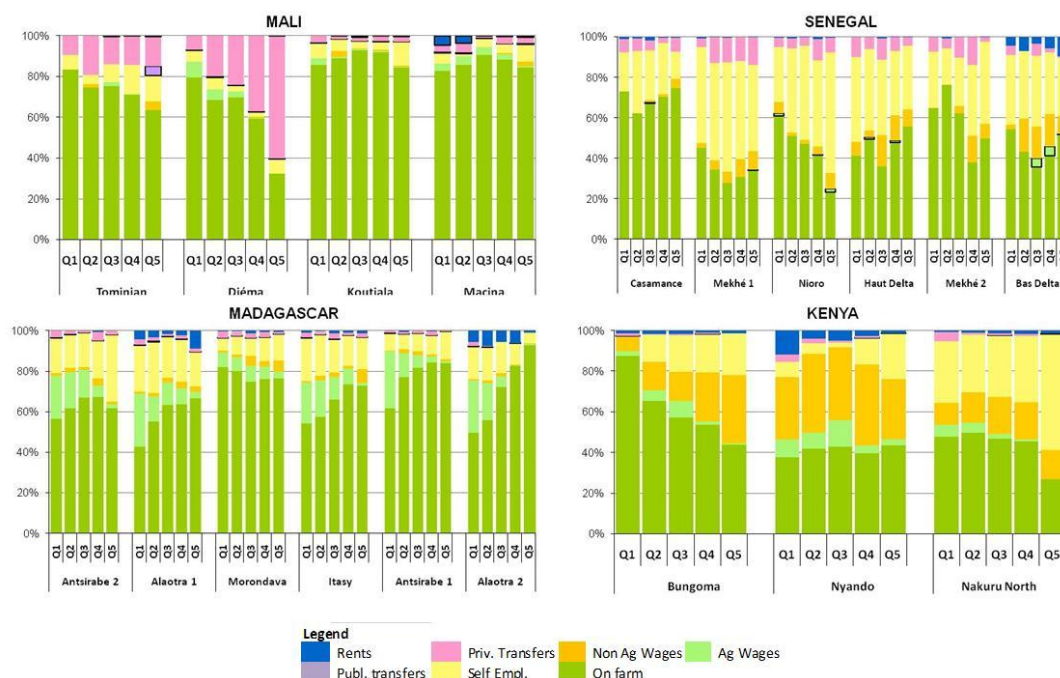


Figure 2: Contribution of Activities and Income sources in the Surveyed Regions

Sources: RuralStruc Surveys

Agricultural activities are predominantly orientated towards the production of food crops, which account for between 60% and 80% of the value of agricultural production. This crop selection is a combination of available markets and strongly a result of risk aversion. Livestock raising is also widely practiced but it usually weighs less heavily in a region's overall agricultural output, except in specific cases such as Casamance (Senegal) or Antsirabe (Madagascar) where dairy products have been significantly developed. Other production sectors (agro-industrial crops or traditional export commodities) are more localized and reflect a combination of historical, agro-ecological, and institutional factors to their development. These include tomato in the Upper Delta of the Senegal River valley, cotton in Koutiala (Mali) and in Casamance (Senegal), sugarcane in Morondava (Madagascar), Bungoma, and Nyando (Kenya), or peanuts in the Groundnut Basin (Senegal).

Moreover, the level of self-consumption of food crops can be very high, as pointed out in Figure 3, which support the earlier point that the crop mix choice is a risk strategy. This is especially the case in Madagascar and in Mali, where between 20 and 40% of surveyed households do not sell any of their output. Self-consumption accounts for 60% of the value of farm production on average, up to 80% in the most marginalized regions of Mali (Tominian). Several factors seek to explain the importance of self-consumption in these regions, but the main driver is related to income levels. The poorest, who are most vulnerable, try to minimize food insecurity by ensuring their self-sufficiency. The self-consumption rate decreases in parallel with income growth: the richest quintiles in Madagascar and in Kenya "only" self-consume between 30% and 40% of the value of farm production. A second factor refers to the geographic isolation of some regions, whether in absolute or in relative distance to urban markets ("relative" referring to the absence of high quality transport infrastructure). This differential accessibility generates high variance in self-consumption rates within the same region, such as in Antsirabe (Madagascar) where the most isolated households self-consume about 70% of the value of farm production on average, against 40% in areas where households have better access to roads and transportation. Finally, a third factor reflects the existence of other non-food crops specifically oriented towards exports, agribusiness processing, and/or urban markets. These crops offer alternative opportunities for



farm income and help reduce food risks, and include the case of cotton in Mali, or tomato and cassava in Senegal. One can note however that even if self-consumption is widespread, a total disconnection from markets is uncommon, and only concerns certain groups of households living in situations of extreme isolation. However, the ability to market farm products does not always make a household richer, more food secure, or more agriculturally diversified. Some extremely poor households are forced to sell a significant portion of their food crop production to meet urgent short-term monetary needs.

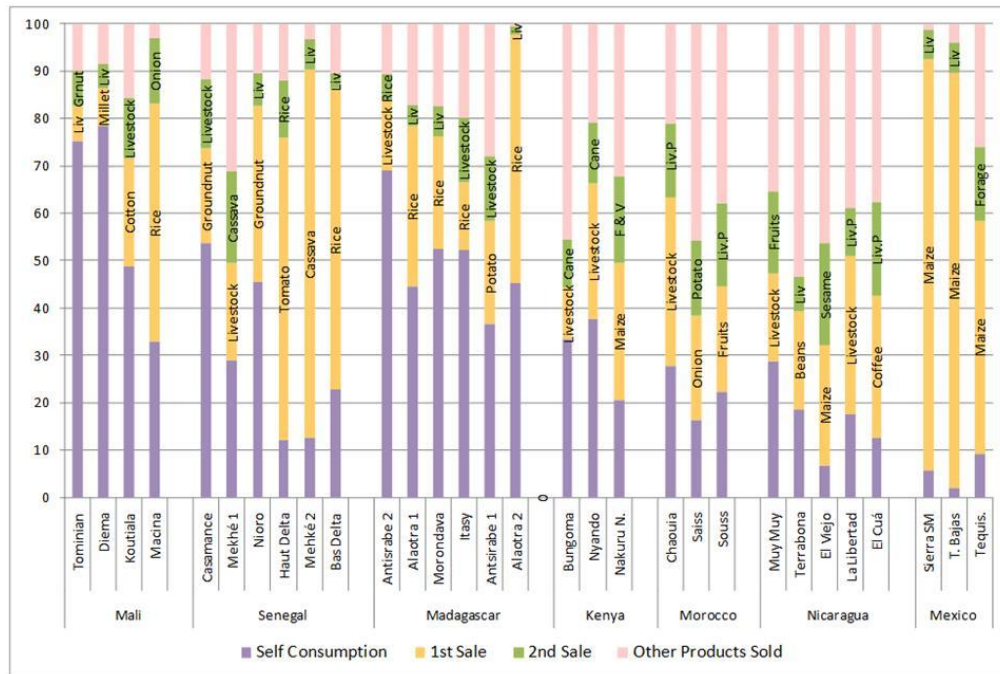


Figure 3: Self-consumption and Major farm Sales in the Surveyed Regions

Sources: RuralStruc Surveys

Although agriculture is the core piece of all production systems, households whose sole economic activity is farming are the exception. They are only found in regions where a specific value chain is well enough developed to provide high returns from intensive farming of one crop (such as in the rice production areas of Madagascar) or with very low diversification opportunities outside agriculture. However, rural diversification outside the farm is not nearly as "buoyant" and "promising" as described in the literature (Barret and Reardon 2000; Bryceson 2002, Ellis 2000 and Haggblade al. 2010, among others). Figure 4 shows the main types of off-farm income (wage labor and nonfarm self-employment or self-employment and public and private transfers) and their contribution to overall income.



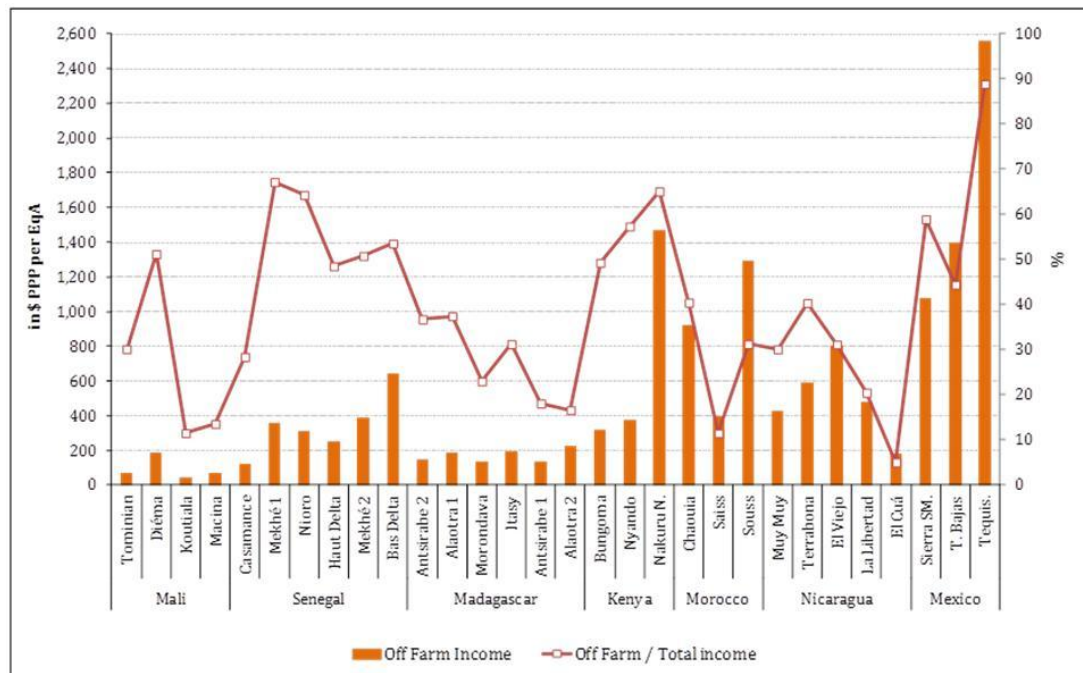


Figure 4: Main off-farm income sources and their contribution to overall income in the Surveyed Regions<sup>5</sup>

Sources: RuralStruc Surveys

Agricultural wage labor is a frequently recorded, but never a dominant income-generating activity in the studied regions. For the poorest, wage labor can supplement farm income in the interstices of the agricultural calendar, when local demand exists. Local agricultural labor demand depends on the differentiation of production structures –related to the stage of agricultural structural transformation- and the presence of larger farms, sometimes entrepreneurial or agro-industrial that are characterized by their use of hired labor. Accordingly, in the studied regions, and more generally in SSA, wage labor is still very limited, the majority of farms being small and having access to an adequate supply of family labor. Moreover, wage levels are low or very low: the average salaries range from about \$2PPP/day in Madagascar to \$8PPP/day in Senegal. Jobs are also seasonal, so that it would not be possible, for example, to earn \$8PPP/day in Senegal across the whole year. Agriculture wage labor consequently provides additional incomes for the poorest and can hardly be a realistic option out of poverty in SSA.

Non-agricultural wage labor is also common, but its extent is more limited. Its existence is closely related to the general level of development and to the specific conditions of the regional economy (existence of agribusinesses or manufacturing industries, handicraft or services enterprises, etc.). Because of their characteristics, the agriculture-based regions of the study offer few opportunities of this type. Only Bungoma and Nyando in Kenya reveal significant non-agricultural wage levels (especially in local agribusiness). In general however, localized opportunities for non-agricultural wage employment have not contributed to widespread poverty reduction because they do not pay well enough.

<sup>5</sup> While per capita ratios were used in the previous sections to compare the survey results with poverty lines or GDP per person, it appears more accurate to use an Equivalent Adult approach (EqA) in order to take into account the very significant differences that can exist between households, regions and countries in terms of household structures. The RuralStruc Program selected a simple approach based on nutritional needs as defined by the World Health Organization.

Independent non-agricultural self-employment activities are widespread. They usually correspond to handicraft, handiwork, petty trade and services, and are characteristic of the informal economy of less developed countries. They generate low and often occasional, irregular and random incomes during the calm periods of the agricultural calendar (odd jobs during the dry season). These activities are implemented by both the poorest as a survival strategy, and the better-off who seek to diversify and supplement their income. It is rare that these micro- and small-businesses are highly profitable and provide the main component of overall income, unless households have substantial capital.

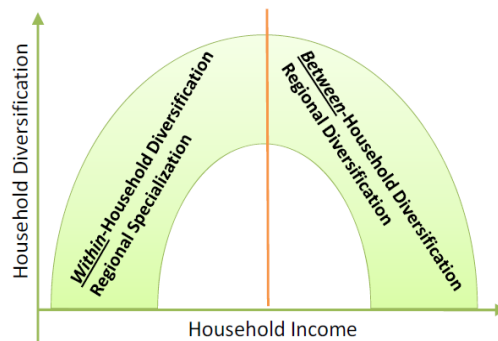
While public transfers are nonexistent in the SSA regions of the study, private transfers are present and are most often associated with migration. Remittances are difficult to estimate but can be a significant component of income at household levels. The results show that they contribute significantly to revenues in one study region in Mali (40% in Diéma) against 5% to 15% in other regions. Migration can generate meaningful returns, but usually requires significant capital to be implemented and consequently the strategy is only effectively employed by the already better-off who seek to receive remittances in return for their initial investment.

### **Possible causes and consequences of rural transformation: the “inverted U” pattern**

The relationship between income and diversification of economic activities at the household level can be characterized by an inverted U pattern whereby poorer households diversify their activities to mitigate risks and more well off households specialize in only one or two activities (Figure 5).

The surveys noted how the very poorest households were often engaged in very few activities. In some instances they were landless peasants working only in agricultural wage labor. In others, they were subsistence farmers using all family labor on their home plot. However, slightly more well off households tended to diversify. They would often have a household member working in petty trade in a nearby town, or would have a long-term migrant working in the national capital and sending remittances home. It seemed that the more well off the household, the greater number of economic activities in which they were involved.

Yet, at a certain level of income, the pattern reversed. The richest households in the survey are the least diversified. They tend to send their children to school. Each adult in the household tends to hold only one full time job, if they work at all. The observation that the richest households consistently specialize in a limited number of economic activities leads to the assumption that specialization is a general trend of households. Household activity patterns can also be limited by the constraints related to the characteristics of their major activity: for instance, specializing in high value products is often demanding and allows little time to develop other activities. If households prefer to specialize but at poorer levels do not do so, it must mean that they cannot. The implication of an inverted U pattern is therefore that poor households make a strong effort to diversify as a way of earning more money to meet their basic needs and mitigate their very high levels of risk, but beyond a certain income threshold these risks are sufficiently reduced and they begin to specialize. The progression along the inverted U can be illustrated in the figure below.



*Figure 5: Diversification within and between Households and the Inverted U Pattern*

*Sources: authors*

This inverted U pattern, illustrated at the household level, translates into a similar pattern observed at the level of the regional economy. When most households in a region are poor, they tend to engage in diversification as a way to mitigate risks. This means that most of the region's households look the same in terms of economic structure. Yet in regions where most households are relatively well off, each household tends to specialize. However, they all tend to specialize in different activities – some in farming, some in factory work, some in services. This creates a diversified regional economy composed of households that individually specialize. In sum, as regions become more well-off they move from situations of “within-household” diversification to situations of “between-household diversification.”

When conducting statistical tests on the relationship between these diversification “types” (i.e. within or between household) and income, an exponential relationship was noted. Regions characterized by “between-household” diversification seemed to show a quicker income increase than did regions characterized by “within-household” diversification. Further, nearly all of the regions surveyed in sub-Saharan Africa remained characterized by “within-household” diversification. This suggests the possibility of poverty traps. It may well be that the returns to diversification in sub-Saharan Africa are not high enough to mitigate the severe risks that households on the sub-continent face. Consequently very few are able to specialize, and their growth prospects are inhibited.

## **How to help rural transformation and structural change?**

The situation of rural poverty is critical in developing countries, especially in SSA. The results of RuralStruc show rural economies mostly dominated by an agriculture characterized by low productivity and low local value addition in a context of risk-related poverty traps. Inequality is extreme. It is marked on one end by landless families or micro-farms practicing survival agriculture and at the other by better-off households either specializing in higher productivity and value-addition agriculture or diversifying their activities into better paid jobs, thanks to a better endowment in natural, physical, financial, human, and social capital. All households, however, are limited by the constraints and the structural characteristics of local economies. Thus, if the determinants of rural household income and household diversification are mostly micro (household assets, portfolio characteristics, managerial skills), the determinants of returns to an activity refer broadly to meso and macro conditions. Markets are decisive, but the institutional environment is equally critical. The low returns to nonagricultural activities and the difficulty of on-farm diversification observed in SSA are clear reminders of the limitations of the overall context.

In response to the magnitude of these challenges, massive investments and actions are needed to improve the allocation of public goods (such as infrastructure, irrigation, research, information,

training, capacity building, etc.), to encourage and to support the development of incomplete markets (such as credit, insurance, technical advice), to reduce transaction costs and to decrease risk at the producer level. These investments will involve a massive effort by the State, for instance through smart subsidies, especially to facilitate input access and extension services, as well as very low-interest-rate loans, which are the only way to improve the existing farming systems, facilitate innovation, and increase productivity. They will also involve the mobilization of private investment, including through appropriate partnerships.

The paper is not prescriptive. However, by pointing out these challenges that less developed countries, particularly those in SSA are facing, as well as their room for maneuver, the paper has aimed to provide “food for thought” and to feed the policy debate on how to help rural transformations and structural change.

Given the “long shopping list” of possible policy measures, prioritization and targeting are essential. Public policies must deal with big numbers--SSA will have to deal with almost 200 million new rural workers by 2025. Moreover, policies must target an inclusive and sustainable growth process. This core objective shapes the priorities for agriculture in terms of strategic choices regarding the type of development model.

First, family farms must be a priority, as they represent the majority of agricultural structures in less developed countries. With adequate policy support, smallholder farmers can develop and contribute to poverty alleviation. They have comparative advantages and can become competitive. To achieve that goal, productivity improvement must be promoted, but it must be done in a way that deals both with issues of employment and the environment.

Second, staples must be a priority. Almost every farm household is engaged in staple crops, while other agricultural products engage a more limited population. The breadth of staple production offers major leverage in terms of labor, overall income, and growth linkages, plays a major role in increasing rural demand and facilitating the emergence of other activities as well as in risk management. Any increase in staple production can be a catalyst, and can therefore, help unlock the potential for innovation and diversification, both on-farm and off-farm. Moreover, staples have a huge growth potential for the sector, -especially cereals-, as staples will still account for the bulk of food demand for years to come. Finally, as staples have huge potential for downstream activities related to processing, growth in staple production could easily result in more value added locally, strengthen the linkages between rural areas and their nearby small towns, and contribute to rural diversification. These priorities for agriculture are obviously not exclusive. Other opportunities, when they exist, must be seized to allow active strategies to nurture a more dynamic rural non-farm economy.

Third, a “territorial approach” for local development is needed, as support to agriculture must be part of a broader support to rural transformation fostering local value addition and rural-urban linkages. In that context, specific investments (public goods), targeted support to local private investors, and empowerment of local institutions are needed at the level of small towns and rural cities in order to foster territorial development.

Finally, one should note that there is unfortunately no one-size-fits-all solution. But one can be sure of the need to build local capacity for policy making and to reinvest in knowledge creation. Doing so will result in better informed models, a re-articulation of fragmented sectoral policies in the context of long and medium term development strategies, and stronger local institutions.

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